



E-mail: plantop@ga.wa.gov
Phone: (360) 902-7257
www.ga.wa.gov/plant

Send articles and editorial
submissions to
Phil Partington:
ppartin@ga.wa.gov

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Shop Talk

Volume 10, Number 2

Summer 2005

Building your computerized maintenance management solution

'It's critical to practice sustainability'

Guest article by Jon Mangerich, Four Winds Group Inc.

An effective computerized maintenance management system (CMMS), such as the kind in use at [Washington State Ferries](#), improves worker safety, workplace efficiency and equipment performance. However, a successful system does not happen without the right combination of technology, database design and trusted support.

Build it right and it will pay you back for years to come.

Like the foundation of a building, a solid CMMS is a product grounded on sound, proven principles. The foundation is the database and like a building's foundation it must have the right materials to support the overall structure. The database foundation of a CMMS is made of key

assets (plant, equipment, staff, tasks, procedures and parts, for example). These selected assets must be logically codified, prioritized, organized and staged for import into the records base. Among other things, a good

CMMS provider is part architect and part general contractor, able to translate design requirements into a plan and then bring the right resources needed to build your system. A well designed CMMS — like a well designed building — accommodates change and supports your organizations' future growth, no matter



Washington State Ferries has selected a CMMS to "improve worker safety, workplace efficiency and equipment performance."

how many change orders come your way.

Just as the interior floors, work space and building systems are next added to the building, CMMS Work Flow Management (WFM) comes next.

(Please see "CMMS," page 6)

Capitol Facilities group makes a clean, green sweep

GA's Custodial team nabs national Green Cleaning Program designation

Edited by Shop Talk staff

The custodial operation of Washington state General Administration's Capitol Facilities group has been notified it will be designated a Green Certified Cleaning Program in recognition of its dedication to cleaning for health and reducing environmental harm. With this, "we have become one of the first three OS1 Green Certified

Cleaning Programs in the nation," said Pattie Williams, manager of custodial services, refuse and recycle services. The first two organizations so designated were the Boeing Company-Anaheim and Sandia National Labs, a division of Lockheed Martin.

OS1 stands for Operating Sys-

tem 1. It is a program that focuses on cleaning for health, safety and promotes cleaning productivity for efficiency and effectiveness.

(Please see "Green," page 7)



Visit us on the web!

Be sure to visit the Plant Operations Support website at www.ga.wa.gov/plant. While you're there, feel free to check out the many great resources available at the click of the mouse, including professional development announcements, Mac's Nickel ads (a listing of surplus and salvage opportunities), and much more!

Join the Consortium Listserv!

The Consortium's electronic listserv links you to various plant operations and maintenance professionals, and allows members to advertise surplus or salvage items, solve problems, answer questions and simply learn from each other's experiences. Contact your Plant Operations Support staff at plantop@ga.wa.gov to sign up!

If you're not already a member of the Consortium,...

...what are you waiting for? If you don't already have every resource at your disposal and all the money you need, then find out how the Plant Operations Support Consortium can help! Contact us at plantop@ga.wa.gov.

POS Notes



Bob MacKenzie

Join us in celebrating the health of the Consortium, as **we approach our 10-year anniversary.** We're gratified

so many members have renewed their memberships in the past few months. That reflects tangible value received and retains the collective strengths of the group as we enter fiscally constrained times ahead.

We'd also like to welcome our newest members: Port of Everett, Pierce County Housing Authority, Pierce County Library System and Sunrise Beach School.

Join us next year in Wenatchee. We were thrilled to see so many members at the May Energy/Facilities Connections conference in Wenatchee. The conference was pronounced a success by more than 90% of participant evaluations, so we'll be replicating the event in 2006, May 17-19 at the same location. We've added another one-half day to the conference to enable requested topics and event modifications (see "[Energy and Facilities a successful connection](#)," on page 4). We'll have more information on the conference as the agenda and other details are finalized. We hope you'll mark your calendars now and plan to join us in Wenatchee for the second annual Energy/Facilities Connections in Wenatchee, Washington.

Your POS staff has maintained a steady tempo the last year. Washington state and many other public agencies began their new fiscal years on July 1. The date provides a fitting time to do a status check on member activities and savings received. You might find these statistics interesting. More than 4,235 requests for assistance were received by POS staff from July 1, 2003 to June 30, 2005. Of those, 73.5% were resolved within 72 hours, and fully 92.5% were resolved within five days. The remaining requests were usually connected long-term public works related issues or other issues requiring long duration resolution. And, many of you were instrumental in resolving those request and we are deeply grateful of your selfless commitment to avoid reinventing the wheel. Without member to member interactions the Consortium would not flourish.

Here's a breakdown of the 4,235 requests for assistance by category: facilities management/maintenance (technical assistance, on-site assessments, referrals, models), 33%; indoor air quality/environmental issues (technical assistance and on-site), 19%, equipment bro-

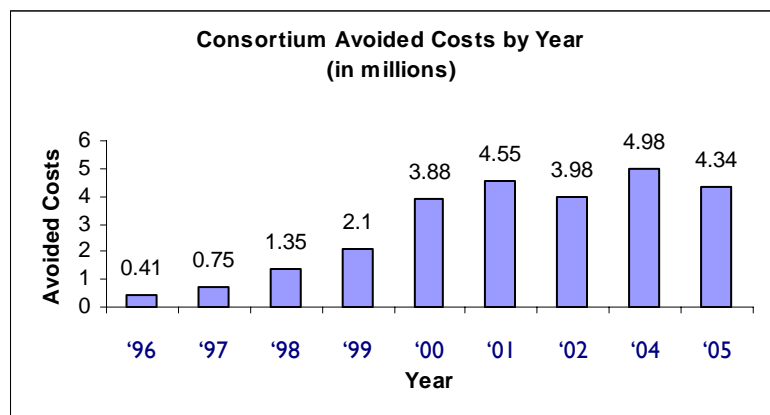
kering (technical assistance and on-site assessment), 18%; vender/product identification (research, cost studies), 10%; public works-related (project management, small works roster, technical assistance and on-site), 9%; professional development (training, presentations, conferences and research), 7%; other miscellaneous, and we mean truly miscellaneous, 4%!

Savings realized by members according to our formulae during the same 24 month period topped \$8.3 million. These savings were both avoided costs and outright savings realized by cost reduction for purchases arranged through the Consortium staff.

Washington state agencies enjoyed the largest percentage of savings for \$3.9 million; followed by school districts, \$1.7 million; municipalities, \$1.1 million; higher education, \$480,000; ports \$480,000, higher education and other members, \$175,000.

These are numbers that translate into better facilities for our respective stakeholders and you can all take a bow for making them happen!

(Continued on next page)



(Continued from "POS Notes" on previous page)

Thanks to those members who consistently practice sustainable operations. We've seen a lot of equipment and materials re-used within the Consortium and those practice directly impact our respective stakeholders. Remember to contact us and let us know your resource needs so we can search for you and give you right of first refusal when we locate the item or piece of equipment. The [Listserv](#) is one of our primary communication media, so ensure all of your staff is subscribed and that someone monitors the messages routinely.

You might not know that your POS staff is managing a diverse array of construction and assessment projects throughout the Northwest. Current projects include a Voice-Over Internet Protocol installation for a large school dis-

trict; reservoir roof replacement for a public utilities district; administration annex remodel for a county; purchase, location and associated site work for a modular building for a housing authority; removing a 10,400 sq. ft. modular and associated site work for a community college; managing environmental permitting for a mid-sized school district; managing HVAC and roofing projects for a state agency and more. Meanwhile, Cheryl Royal and her condition assessment team are finalizing a recent major assessment of Tri-Met facilities in Portland, Oregon, even as she manages a host of Job Order Contracting-related projects throughout Washington state. Whew! I'm getting tired just writing these! If you're not utilizing your Consortium to the maximum,

please give us a call to explore enhanced value opportunities. Thanks for all you do for our respective stakeholders.

Bob

Plant Operations Support Consortium Honor Roll

New members marked in *purple*.

K-12 Schools

Abbotsford, BC	Kittitas
Brewster	LaCrosse
Bridgeport	Marysville
Cascade	Mission, BC
Centralia	Moses Lake
Chehalis	Mount Baker
Clover Park	Mount St. Michael's
Columbia-	Mukilteo
Burbank	North River
Comox Valley, BC	North Thurston
Coquitlam, BC	Northshore
Coupeville	Oak Harbor
Dayton	Ocean Beach
Delta, BC	Ocosta
East Valley	Okanogan Skaha, BC
Spokane	Peninsula
Easton	Port Townsend
Eatonville	Quilcene
Edmonds	Quillayute Valley
Elma	Quinault Lake
Enumclaw	Rochester
ESD 101	Sequim
Federal Way	South Kitsap
Highline	Snohomish
Hoquiam	Snoqualmie Valley
Issaquah	Stanwood-Camano
Ketchikan, AK	Sumner
	<i>Sunrise Beach</i>
	Surrey, BC

Thorp
Vancouver
Vashon Island
Wenatchee
White River
Wishkah Valley
Yelm

Universities/Colleges

Big Bend CC
Clark College
Columbia Basin CC
CC of Spokane
Highline CC
Olympic CC
Renton TC
Evergreen State
College
Univ. of Washington
Washington State
University
Energy Coop
Extension
Eastern Washington
University

Ports

Port of Edmonds
Port of Everett
Port of Ilwaco
Port of Kennewick
Port of Longview

Port of Sunnyside
Port of Olympia
Port of Seattle, Sea-Tac Airport

Municipalities

City of Hoquiam
City of Marysville
City of Redmond
City of Tukwila
City of Tumwater
Clark County
Cowlitz County
Cowlitz County PUD #1
Jefferson County
King County Housing Authority
King County Metro South
King County Wastewater
Treatment Division
Westpoint
Kitsap County
Lakehaven Utility District
Lewis County
Pierce County
Pierce County Housing Auth.
Pierce County Library System
Tacoma-Pierce City Health Dept
Town of Eatonville
Whatcom County

Canada

Attorney General, BC

BC Building Corp
City of Port Moody

States

Alaska
Oregon Dept. of Admin.
Svcs.
Oregon Youth Authority

Washington St Agencies

Corrections
Criminal Justice Training
Commission
Ecology
Fish and Wildlife
General Administration
Health
Information Services
Licensing
Liquor Control Board
Military
Natural Resources
Parks & Recreation
School for the Blind
School for the Deaf
Social & Health Services
Transportation
Veterans Affairs
Washington St Criminal
Justice Train. Cnt.
Washington State Patrol

Check out the Plant Ops website for quick links to Consortium member websites—<http://www.ga.wa.gov/plant>



Energy and Facilities: A successful connection

Conference proves a success in its inaugural year

By Phil Partington, POS staff

The inaugural Energy/Facilities Connections Conference was a big success, thanks to the partnership of Washington's General Administration [Energy Team](#) and Plant Operations Support Consortium, some great sponsors ([Washington General Administration](#), [Chelan County PUD](#), [Northwest Energy Efficiency Coalition](#), [Washington State University Energy Co-op Extension](#), and [Wenatchee School District](#)) as well as a guest list of first-rate professionals.

For those who weren't able to make it, about [155 registered](#). Most were from Washington state, but the conference also drew facilities and energy professionals from Idaho, Mon-

tana, Nevada, California and Canada. This diversity made for an outstanding networking pool of experts for cross-talk and resource-sharing. There was representation from various Washington state agencies, municipalities, U.S. military, ports, school districts from Washington and Canada, public libraries, the Swinomish Indian Tribal Community and more. [Click here to view the conference agenda for a better idea of what took place.](#)

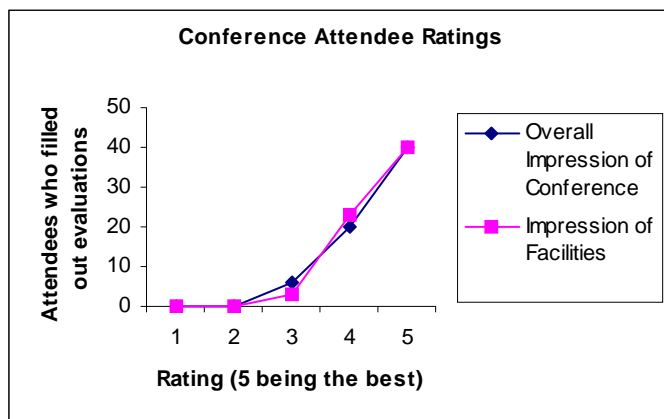
Of the 66 attendees who returned evaluations, over 90% rated the conference either a four or a five out of five. No one gave a rating lower than three, which we take as a good sign. Some of the positives expressed by attendees were that the breakout sessions were informative and interesting, and great networking, with many opportunities to interact with other professionals, including during a no-host, after conference gathering, as well as a guided tour of Rocky Reach Dam.



Some areas needing improvement, as indicated by the evaluation results, included not having an adequate breakfast selection, and the session rooms could have been better sound-proofed. Other attendees suggested topics for the future. All comments and suggestions are greatly appreciated and will help us to improve the quality of the conference for next year. Have a suggestion? Please send us your feedback.

The event is scheduled to pick up where it left off next year, celebrating a second birthday May 17-19, 2006. It will be held at the Wenatchee Convention Center once again, due to the positive feedback of the location from attendees. After next year's conference, the plan is to hold it every two years.

Thanks to all who attended. We hope the experience was as beneficial for you as it was for us, and we look forward to seeing you all next year.



Hot button professional development opportunities

Please refer to the web links or provided contact for additional information about the conferences.

- **Washington Finance Officers Association Conference**

September 14-16, 2005—Hilton Seattle Airport & Conference Center, Seattle, WA
<http://www.wfoa.org>

- **Washington State Association of Counties (WSAC)**

September 20-23 in Vancouver, WA
<http://d30060429.purehost.com/wsac>

- **Washington Association of Water & Sewer Districts**

September 28, 29 & 30, 2005
 Campbell's Lake Chelan Resort, Chelan, WA
<http://www.waswd.org/>

- **WAMOA Conference**

October 5-7, Spokane, WA
<http://www.wamoa.org>

- **Washington General Administration Conference & Trade Show**

November 2-3, 2005
 Seattle Convention Center
 Contact: Kerry Bustetter (360) 902-0925, kbustet@ga.wa.gov

- **2005 IACC Conference**

November 8-10, 2005 - Wenatchee Conference Center
 Contact: Bill Cole (360) 586-4125, billc@ctd.wa.gov

Energy/Facilities Connections Conference album



E. Lander Medlin, executive vice-president, [Association of Higher Education Facilities Officers](#), and keynote speaker on Day 1, discusses keys to collaborative relationships, establishing connections, and taking a leadership role.



More than 155 conference participants enjoyed presentations and training sessions during the event.



Conference registration processes were expedited and efficiently administrated by Energy team members Stuart Simpson (foreground), Karen Purtee and Kathi Fyfe.



Tom Eckman, senior policy analyst for the Northwest Power and Conservation Council, served as keynote speaker on Day 2, addressing "Future Energy Supply in the Northwest."



Pattie Williams, manager of custodial refuse and recycle for GA served dual roles during the conference: as moderator of Track B and as a key session presenter, discussing the pros and cons of competitive contracting."



Clint Loughheed, manager of GA's Energy team, was the visionary behind the conference and served as co-conference moderator.



Bob MacKenzie, plant operations support manager and co-conference moderator, chats with E. Lander Medlin during a networking session.



Dan Wessel, facilities director for Peninsula School District, delights in testing a solar-powered cart during a session break.



Bryan Visscher, maintenance supervisor for Wenatchee School District (left) and Frank Eshpeter, facilities service manager for Highline School District, learn about energy saving diagnostic technologies during a training session.



("CMMS," continued from page 1)

WFM controls how information moves through the structure using features in the software to present each user with the exact information s/he needs to perform their job function. Effective WFM includes such items as user specific queries, priority assignments, status coding, email notifications, Gantt charts views etc. The purpose is to get the

"Effective CMMS training serves the same purpose: training users to use features as needed to accomplish assigned tasks."

right information to the right person for action. Users must be able to locate, issue, schedule and close work assignments for their areas of responsibility, quickly without extra steps. Maintenance staff "get it right" when procedures assure that the right person with the right tools and the right information gets to the right place at the right time to do the job right. Report functions must be infinitely variable to support constantly changing management models, budget measures and regulatory or audit reporting.

Training activates the new system. When a new building is brought to life a myriad of systems are started, tested and adjusted to get the right performance. Power, data, air conditioning and safety are all brought on-line with different amounts of each directed

or placed according to need. Effective CMMS training serves the same purpose: training users to use features as needed to accomplish assigned tasks. Support wraps the whole structure in a tight package.

Like a protective cover, vendor support addresses the "punch list" items which can range from sophisticated data and network problems or crashes to missing reports.

Training brings the system to life while support stands ready when systems get stuck or stall. All buildings get re-modeled and change management is an everyday occurrence. Your CMMS must be able to grow and change with new additions, functions, modifications or to accommodate taking on new assignments, security, safety or even custodial duties. Additional construction support, such as adding newly built or purchased assets, re-training in support of changed management structure or starting full spares management and MRP require a vendor ready and able to help you design and implement your new addition(s).

Extended service / support options are also important. Similar to choices made on your building(s) to hire outside resources for routine maintenance, security services, landscaping etc. your needs may include regular or even sited expertise able to support anything from the CMMS hardware and network to ad-

vanced material requirements planning and procurement. Such services can relieve over-taxed IT staff, provide fill-in help-desk support or even remote these functions to meet peak demand or avoid budget busting hiring of additional staff.

Other periodic

or ongoing services include extended training (train the trainer), advanced reports (provided or trained) refined data management, and contract support services (phone, email, and web).



Like the foundation of a building, a solid CMMS is a product grounded on sound, proven principles.

A successful CMMS — like a building — starts with your requirements. It can be built a number of ways but fundamental principles must be honored to secure the foundation and structure. Just as a design/build contractor offers start to finish expertise for a building, a complete CMMS vendor provides the application, expertise and resources to build a CMMS that will grow as your needs grow. Then, as in the case of the professionals at the Washington State Ferry system, you can begin to reap the benefits of improved safety, efficiency and performance.

Jon Mangerich is president of Four Winds Group. His associates presented at the recent Energy/Facilities Connection conference in Wenatchee. Four Winds provides computerized maintenance management system solutions and systems integration for facilities, manufacturing, transportation, utilities, business and government requirements. Visit them on the web at www.fwginc.com.



CMMS users must be able to locate, issue, schedule and close work assignments for their areas of responsibility, quickly without extra steps.

("Green," continued from page 1)

It is a complete, results-based, standardized cleaning management system that incorporates the gathering and tracking of tangible data, hands-on training and accurate labor forecasting. The innovative process is in use at the University of Texas at Austin, The University of Massachusetts at Amherst, the USSI Corporation, (a major cleaning contractor) in addition to the Boeing Company, and Sandia National Labs, and others.

"The Green Certified Cleaning Program determination we received was based upon a rigorous 3rd party audit that contained over 225 factors that have been benchmarked as best practices in cleaning organizations and which exceed the LEEDS-EB criteria for Silver certification.," said Williams.

It means, "we can easily demonstrate worker efficiency, reduction of inventory, use of Green Seal chemicals, waste reduction, training certification and tracking of costs," she said. A minimum score of 80% is required to achieve the certification.

The GA custodial program scored a solid 86%, which was "500 times that of our baseline audit score of 17%."

By surpassing the Green Certified Cleaning Program criteria Williams' staff can document that their cleaning organization is using practices that

cause facilities to be clean, with minimal impact on the environment. And, it documents their services as a best value. Facilities they clean with this process will earn points toward a LEED™ Existing Building Silver certification.

GA custodians began using the OS1 process after it was discovered that their old process was preventing them from fulfilling their customer promise of reliable, quality cleaning services. Custodians first tested the process in a pilot in one of the largest buildings on the state capitol campus in Olympia. "The pilot was a huge success and has enabled our custodians to gain efficiencies and provide more responsive customer service," said Williams.



Ki Smith, vacuum specialist, tests a new vacuum to improve cleaning efficiency



Nouk Leap, restroom specialist, uses green cleaning products to comply with the OS1 process

Greater efficiencies, increased service, reliable quality, reduced cost, and sustainable work practices have placed GA custodians at the forefront of the cleaning industry and in a favorable position as they enter a new arena with competitive contracting looming on the horizon.

[Click here for more information on green cleaning.](#)

For more information about Green Cleaning contact Pattie Williams (360)902-0960, or e-mail pwillia@ga.wa.gov.

Pattie Williams not only manages GA's custodial operations, but also provides her expertise to POS Consortium members in the form of on-site custodial assessments, Green Cleaning evaluations and other related services. We are deeply grateful to Pattie and her director, William (Bill) Moore, for their selfless, outstanding support of the Consortium these past nine years.

Fredricks receives Honorary Lifetime Membership Award

Excerpts taken from The Gazette, Washington General Administration's employee newsletter

POS staff is excited to announce the most recent recipient of the Consortium's Honorary Lifetime Member Award. Grant Fredricks, former deputy director for Washington's General Administration, was instrumental in the development and implementation of the Plant Operations Support Consortium.

After his career in the military, Fredricks joined Washington state government in 1985 as a civil engineer with the Department of Ecology. He joined Washington General Administration in 1989 and served five Directors as Deputy Director. Among the highlights of his tenure:

- Master planning for the Washington State Capitol Campus
- Support for creation of the Plant Operations Support Consortium
- Development for the first ever competitive contracting rules that take effect for state government July 1, 2005



Grant Fredricks (left) is recognized by Bob MacKenzie on behalf of the POS Consortium

Plant Operations Support
206 General Administration Bldg
P.O. Box 41012
Olympia, WA 98504-1012

Phone: 360-902-7257
Fax: 360-753-2848
Email: plantop@ga.wa.gov
<http://www.ga.wa.gov/plant>

Send articles and editorial
submissions to:
Phil Partington
ppartin@ga.wa.gov

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State of Washington
Department of General Administration
P.O. Box 41012
Olympia, WA 98504-1012
www.ga.wa.gov

Linda Villegas Bremer, Director

Washington agency taking LEED on green

GA to implement a LEED silver quality assurance process for all state funded facilities

Guest article by Stu Simpson, GA Energy Team sustainable building advisor

July 24 marks the day when Engrossed Substitute Senate Bill (ESSB) 5509 goes into effect. The legislation requires that all buildings, over 5,000 square feet, that receive State funding in the capital budget be designed, built and certified to the LEED™ Silver* standard. This applies to new construction and major remodels where the renovation cost is greater than 50% or the assessed value of the existing building. Washington state agencies and state universities fall under the General Administration-administered program.

[The Office of the Superintendent of Public Instruction](#) has responsibility for developing and administering a process for K-12 schools.

GA has assembled a committee of affected agencies and representatives of the design and construction industry that will convene to provide input into the GA process development. GA has responsibility for tracking implementation, and for receiving reports from affected projects regarding costs and savings. Project operational savings reporting is required from 2006 to 2016.

GA will, in turn, make biennial reports to the Legislature and the Governor starting in 2006 regarding implementation, recommendations for incentives or disincentives, and project costs and savings.

It is likely that state agencies and state universities projects will have to participate in a Sustainable Design and Building submittal process with GA. This will include submittals at each phase of design and after construction. This will include information about the project, the project team, project schedule, and LEED™ strategies to be incorporated in the design. GA will provide project design feed back regarding the LEED™ strategies, and potential for free technical and financial assistance.

Guidelines to state agencies and universities are expected to be released in September 2005. Rule making is expected to take an additional 6 to 9 months.

* LEED Silver – A level of Green Building within the US Green Building Council's, Leadership in Energy and Environmental Design (LEED™) Rating System.

For more information on LEED™ go to www.usgbc.org.

Stuart Simpson is the Washington state Sustainable Building Advisor and has been a frequent contributor to Shop Talk and a wonderful supporter of the Consortium. Contact Stu (360)902-7199, or e-mail ssimpso@ga.wa.gov.